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ABSTRACT

This report finds two fundamental problems threatening higher education's ability to help America succeed in challenging times: first, the lack of recognition by state and national leaders of higher education's value; and, second, the lack of recognition by colleges and universities of their need to change. The report presents recommendations to the 15 southern states: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia. This report discusses five ways higher education in the 15 southern states needs to change: (1) alter the balance between teaching and research; (2) redesign what colleges and universities teach; (3) increase the emphasis on quality and productivity; (4) respond more directly to job market challenges; and (5) strengthen connections between colleges, schools, and the workplace. An attachment presents state-by-state background data covering: shifts in public higher education funding; personal income; civilian labor force status; percent of adult population with 4 or more years of college; headcount enrollment of Black students; enrollment growth; federal support for research and development; medical schools; employees by major industry; infant mortality and poverty; college enrollment rates; growth in state and local government expenditures; public higher education share of expenditures; shifting sources of higher education funding; median annual undergraduate tuition; and appropriations of state tax funds for higher education. (GLR)

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ED 366 280

CHANGING STATES

HIGHER EDUCATION AND THE PUBLIC GOOD

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THE COMMISSION FOR EDUCATIONAL QUALITY
Southern Regional Education Board

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The Southern Regional Education Board gratefully acknowledges a grant from the Norfolk Southern Foundation in support of the work of the SREB Commission for Educational Quality.

With the Norfolk Southern Foundation's assistance, SREB has produced a brief video highlighting the issues examined by this report. The video and additional copies of the report may be obtained by contacting the SREB information office at 592 Tenth Street, NW, Atlanta, GA 30318, (404) 875-9211.

Some of the quotations in this report are drawn from a series of essays, "Voices of America for HigherEducation," also published in connection with the work of the SREB Commission for Educational Quality. These essays will continue to appear through 1994.

The Southern Regional Education Board appreciates the editorial contributions of Gordon K. Davies, Director of the State Council of Higher Education for Virginia, in the preparation of this report.

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HIGHER EDUCATION

AND THE PUBLIC GOOD

Higher education is America's number one asset.

This is an uncertain world. International trade, rapid communications, and advancing technologies are changing all the rules. Our nation's population is growing older and more diverse, and more of us depend on proportionately fewer workers. The greater the uncertainty about the world and what America may become, the more certain we are of higher education's role in our future prosperity. In these times, the nation whose citizens have the highest levels of education will fare best.

No one knows where the dramatic changes are leading. When the greatest uncertainty was national security in a nuclear era, America built a preeminent military force. In the midst of today's economic, social, and political uncertainties, America's best protection is a well-educated citizenry. We know of the problems in our colleges and universities. But we also know of their strengths. No higher education system in the world does a better job than America's colleges and universities.

If America's colleges and universities are world class and are among our most prized assets, what is the problem? There are two. First, state and national leaders do not sufficiently recognize the value of higher education in an uncertain world. Their budget decisions are proof that higher education's priority is slipping. Second, colleges and universities do not sufficiently recognize the need to make changes that will keep higher education the number one asset of this nation of free men and women. In a changing nation and world, higher education is changing too slowly.

WE WANT TO PERSUADE CITIZENS, THEIR ELECTED REPRESENTATIVES, EDUCATORS, AND, INDEED, ALL WHO HAVE A STAKE IN OUR REGION'S WELL-BEING THAT HIGHER EDUCATION IS ESSENTIAL AND THAT IT IS AT RISK.

OUR COLLEGES AND UNIVERSITIES CAN IMPROVE IN A NUMBER OF WAYS. THEY HAVE TO IMPROVE IN ORDER TO KEEP OUR STATES AND THE NATION ECONOMICALLY COMPETITIVE.

We want to restate the case for higher education.

We want to make clear the connection between investment and return, between higher education and economic growth, between higher education and social progress, between higher education and a responsible citizenry, between higher education and the future. These connections must be clearly described and understood, for they are important to everyone—those who attend college and those who do not. We want to persuade citizens, their elected representatives, educators, and, indeed, all who have a stake in our region's well-being, that higher education is essential and that it is at risk.

We want to stress the value of higher education in a time of change.

Time and distance no longer isolate—or insulate—Americans from our global neighbors. In today's world, the sun never sets on the international stock market. Business travelers can strike agreements in San Francisco one day and Singapore the next. Billions of dollars can be transferred from Zurich to Tokyo in a fraction of a second.

We live in a new America. Once powerful mega-corporations are now "downsizing" and restructuring in search of the flexibility and responsiveness they need to compete with rising economic powers elsewhere in the world.

Americans are worried about the future. They are left confused and uneasy by the upheavals and aftershocks of an economy going through a fundamental transformation. Blue-chip companies falter. Almost daily, newspaper headlines announce job cutbacks in large corporations. Other jobs may be created in new, smaller businesses—but the public senses less job security. All the while, advancing technology relentlessly quickens our pace.

America's structural metamorphosis is not limited to the economy. The information revolution is shaking our society and its basic values to the core. Most Americans are old enough to remember a time when the media served as a powerful tool to communicate shared values and expectations—from Franklin Roosevelt's fireside chats to John Kennedy's dramatic description of America's destiny in a global New Frontier. Today, instead of three television networks, cable television offers 50 channels, and soon there may be 500.

All of this information and all of these choices mean that it can be even more difficult to have shared national experiences and to get important messages out to all of us. As information multiplies at a baffling, geometric rate, higher education can help us separate knowledge from information. Higher education can help us understand what is *important.*

Higher education's role as a transmitter of civilization's values must not be underestimated. If not colleges and universities, who will acquaint each generation "with the best that has been known and said in the world, and thus with the history of the human spirit?" Higher education is part of the glue that binds the fabric of society. If we weaken higher education, we weaken that bond.

We want to underscore higher education's need to change.

We read and hear of the value that the public assigns to higher education at the same time that we read and hear of frustration that, in today's world, higher education is changing too slowly to respond to those it serves.

American colleges and universities do make important changes. In the last three decades, American higher education dealt with unprecedented growth in enrollments, established first-class research programs, and created a vast network of community colleges—a distinctly American innovation. But we are concerned that the present pace and scope of change in higher education are not what the new circumstances demand.

Our colleges and universities can improve in a number of ways. They have to improve in order to keep our states and the nation economically competitive. Economic growth will occur in those societies that are in the forefront of knowledge, discovery, and skills development.

Our colleges and universities must change in order to teach more complex subjects to ever-increasing numbers of students. Each year, more students come to campus after being out of high school for years; more come from diverse backgrounds. More are employed; more have families; more attend college part-time. They are seeking their place in a world that has an unlimited appetite for skills and knowledge. Although we have the world's best system of higher education, this does not mean that all who enter—or graduate—have been well-served.

ECONOMIC GROWTH WILL OCCUR IN THOSE SOCIETIES THAT ARE IN THE FOREFRONT OF KNOWLEDGE, DISCOVERY, AND SKILLS DEVELOPMENT.

SREB Commission for Educational Quality

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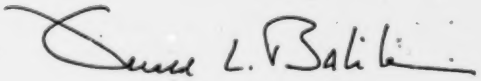
We recognize what is right about higher education in America: its accessibility; its commitment to the democratic ideal of an informed citizenry; its crucial research contributions to agriculture, health care, commerce and industry, and other parts of our society.

We do not seek your attention and your action because American higher education is second-rate. It isn't. The superior quality of our public and independent colleges and universities is recognized by the American public and by the millions of students who have come from around the world to attend them.

Our higher education institutions are fundamentally strong and, therefore, capable of constructive change. But we are worried that these institutions are not getting the support—nor making the changes—they need.



Gerald L. Baliles, *Chairman*
SREB Commission for Educational Quality

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Does Higher Education Have Special Value To Our States?

Thirty years ago, the SREB Commission on Goals for Higher Education made a powerful case for higher education's role in developing the region in its influential report, *Within Our Reach.* It began:

> Within reach of the people of the South lie opportunities that stir the imagination. Economically, this region can be one of the most productive areas on earth. Culturally, its writers, painters, and musicians can bring new glory to American literature, art, and music. Intellectually its colleges and universities can increasingly become pre-eminent centers of learning and leadership.
>
> These things are possible. These states have the natural resources and the human resources to attain them. The catalyst needed to produce the transformation is higher education of the finest quality.

The commissioners–including *Atlanta Journal* editor Ralph McGill, a tireless champion of Southern progress–urged government and business leaders to recognize higher education's catalytic potential in the economic and social development of the region. Their bold call to action still rings true today: "Our goals demand a partnership of higher education, business, industry, and government to promote the growth of professional and technical manpower, to provide the research necessary for full development of resources, and to speed the economic progress of the region."

The possibilities described in 1961 required some imagination. Regional higher education "of the finest quality" was then limited to about a dozen or so well-established independent colleges and universities and a handful of flagship state universities.

Three decades later, the Commission's vision of a dynamic South is not only within our reach, but within our grasp. A succession of state leaders who shared the Commission's belief in the value of higher education have supported major investments in higher education in every SREB state. Ralph McGill and his colleagues would be impressed, if not satisfied, with the region's progress.

In the SREB region—

Per capita personal income has grown from 79 percent to 90 percent of the national average since 1961, and the unemployment rate is below the nation's.

THEN

In the 1930s, Franklin Roosevelt described the South as the nation's number one economic problem.

&

South leads the nation in new plants and major plant expansions.

NOW

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Monthly Earnings By Level Of Education, 1990

IN THE SREB REGION—
The share of our citizens who have four or more years of college has grown dramatically, from about 7 percent in 1960 to nearly 20 percent today.

IN THE SREB REGION—
For every African American student who attended college in 1960, seven are now enrolled.

IN THE SREB REGION—
Colleges enroll nearly one-third of the students who attend college in the U.S.—up from one-fourth in 1960.

IN THE SREB REGION—
The share of federal research dollars grew from about 18 percent in 1966 to nearly 27 percent in 1990.

IN THE SREB REGION—
There were only 91 physicians for every 100,000 residents in 1960. That ratio has doubled and is nearer the national average.

IN THE SREB REGION—
More than 23 million new jobs were created over the last three decades, a rate of job growth that exceeded the national growth in every major job category. The expansion of manufacturing alone added 2.3 million jobs, while manufacturing jobs declined elsewhere in the nation.

But even with this progress—

- Personal income remains below the national average.
- Infant mortality rates and the numbers of children living in poverty are the highest of any region.
- The college-going rate is the lowest in the nation.
- Too few minorities earn college degrees.
- Up to one-third of college freshmen need some remedial education.

There are many ways to examine the value of higher education, including one of the most basic measures—economics. The monthly earnings of today's community college graduate are one-and-one-half times that of a high school graduate. And a four-year college graduate earns twice as much.

The Economic Value of Higher Education estimates an individual's lifetime rate of return on an investment in an undergraduate degree at 12 to 13 percent per year. The public's rate of return is similar. Higher education accounts directly for about five percent of the annual growth in national income. Another 20 to 40 percent of national income growth comes from improvements in knowledge and its application. Here, higher education can claim a large share.

Kenneth Ashworth, Commissioner of Higher Education in Texas, has written that "most of the engines that drive the American economy had their origins in universities. The hybrid plants that sparked the agricultural revolution, the computers that do the work of the information processing industry, the genetic engineering that made the U.S. the world leader in biotechnology, the innovative materials on which the world's foremost aerospace industry depends are all the products of a society that had the foresight to link education and research."

When the National Science Foundation recently chose to move the National High Magnetic Field Laboratory to Florida from the Massachusetts Institute of Technology, where it had been for 30 years, the national media took note of the South's expanding group of first-rate research universities. Today, industry recruiters in most SREB states actively promote easy access to high-quality research facilities at several public and independent universities. National and international companies looking to develop new high-technology facilities pay increasing attention to workforce training and quality of life—and here, too, our well-developed systems of two- and four-year institutions keep us in the competition.

These systems of colleges and universities extend beyond public institutions. More than one of every five students in the region attends an independent college or university. These institutions add diversity and strength to higher education, and some of them rank among the most prestigious in the nation. Among these independent institutions are included most of America's historically black colleges. They, as well as their public counterparts, are a rich source of state and national leaders and a major asset to the South. Collectively, independent colleges and universities provide instructional, research, and service programs valued in the billions of dollars. As SREB states look to the future,

"Most of the engines that drive the American economy had their origins in universities.

"The hybrid plants that sparked the agricultural revolution, the computers that do the work of the information processing industry, the genetic engineering that made the U.S. the world leader in biotechnology, the innovative materials on which the world's foremost aerospace industry depends are all the products of a society that had the foresight to link education and research."

"What makes this country great is that mobility across lines of class and race still is possible—and it's possible only because of education. A good college education is the great equalizer."

—Bob Edwards
Morning Edition
National Public Radio

they should maximize the roles of these independent institutions in expanding access to higher education and improving quality of life.

Some of higher education's value is more intangible and difficult to quantify, but no less real. We often speak of a skilled workforce; we must also be concerned about a skilled citizenry. Thomas Jefferson, one of a group of commissioners who met at the Rockfish Gap Tavern in 1818 to prepare a report on the establishment of the University of Virginia, asserted his ideas about the value of "the higher branches of education":

> To form the statesmen, legislators and judges, on whom public prosperity and individual happiness are so much to depend; to expound the principles and structure of government...to develop the reasoning faculties of our youth, enlarge their minds, cultivate their morals, and instill into them the precepts of virtue and order; to enlighten them with mathematical and physical sciences, which advance the arts, and administer to the health, the subsistence, and comforts of human life; and, generally, to form them to habits of reflection and correct action, rendering them examples of virtue to others, and of happiness within themselves.

What is Higher Education's Value in the New Economy?

A generation ago, the SREB states strengthened higher education to compete with the rest of the nation. Today, the region must recognize higher education's value as a springboard that can lift the American South to global prominence in an international economy.

The South is facing challenges that will determine how well we, our children, and our children's children will live. We face new economic alignments that are changing how we work, what we buy and sell, and how we pay for essential services. Capital can move with virtually no restraints to wherever raw material or labor are available; manufacture and assembly can be done on separate continents; markets are far less constrained by national borders; and consumer preferences seem to be more homogeneous throughout the world.

Poultry processors in the Shenandoah Valley do business regularly in Asia; engineering and construction firms in Georgia bid to build schools and roads in Thailand; major German and Japanese automobile manufacturers locate plants in Alabama, Kentucky, South Carolina, and Tennessee. The list grows daily of transactions that few would have imagined a decade ago.

At the same time, we are challenged by demographic changes within our states. Since 1960, the population of SREB states has increased by 57 percent, or more than 30 million persons. This growth, which accounts for over half the population growth in the United States, is forecast to continue at least into the first decade of the next century and is especially significant as our states assume a prominent role within global production and trade networks.

The profile of our population is changing, too. Growing numbers of African Americans, Hispanic Americans, and Asian Americans are joining our schools and workforce—and their presence will continue to increase in the years ahead. This diverse population is a major asset as the South competes in a global economy—and that asset will grow as more of these citizens gain the education and training to become productive "players" in the new economy.

Our region must marshal all these diverse human resources and position ourselves to participate in a complex global economy that no one yet fully understands.

VOICES of AMERICA for HIGHER EDUCATION

"Higher education is probably the most valuable instrument we have in our attempt to retool the economy for the demands of a new, more globally and technologically oriented society."

—Johnnetta B. Cole
President
Spelman College

WE CANNOT AFFORD TO LET OUR COLLEGES AND UNIVERSITIES SLIP BACKWARDS INTO MEDIOCRITY OR WORSE, AFTER YEARS OF EFFORT TO STRENGTHEN THEM. WE ARE NOT AHEAD OF THE PACK; WE CANNOT COAST. AND YET, WE FEAR THAT WE ARE COASTING—AND SLIPPING BACK.

There are three constants at the heart of successful attempts to make changing populations an asset and to compete in the global economy: knowledge, skill, and the willingness to act. Our schools, colleges, and universities are the institutions to which we turn in order to acquire or create knowledge and to learn the skills that are critical to succeed in a fast-paced, technologically advanced society.

Florida Lieutenant Governor Buddy MacKay cautions against the urge to redefine higher education purely as job preparation or job creation. But, he believes, higher education can increase the South's capacity to succeed in a knowledge-driven economy. "Our region is competing with limited resources," he says. "We have to work smarter than the rest, and we have to invest in areas that will make us most competitive."

The stakes are enormous. The SREB states can be huge winners in the economic realignment that is occurring throughout the world. We can become, collectively, a major participant in the emerging global economy. We have the space, the natural resources, and the human capital to engage in sustainable economic development—economic development that provides jobs and revenue while preserving the environment and a high quality of life.

We cannot afford to make mistakes. Our states are not wealthy, and our efforts at educational improvement, while heroic and pace-setting, have not yet brought us to parity with the rest of the nation or, more important, with our global competitors. We cannot afford to let our colleges and universities slip backwards into mediocrity or worse, after years of effort to strengthen them. We are not ahead of the pack; we cannot coast. And yet, we fear that we are coasting—and slipping back.

How Deep Is Our Commitment To Higher Education?

As part of the work of the SREB Commission for Educational Quality, we convened numerous groups in several states to talk about higher education—consumers, taxpayers, legislators, and educators. We found a great deal of support for higher education and almost no hostility.

The people in our states are proud of their colleges and universities and believe their quality is generally high. Support for higher education as a "good thing" is widespread. But that support is also shallow. There is too little public understanding of higher education's strengths and problems. For the most part, people worry about only one higher education issue: the prospect that rising tuition costs will make it impossible for them or their children to go to college.

There is little sympathy for the notion that higher education is in trouble. Because colleges and universities continue to enroll growing numbers of students in spite of budget problems, people seem to discount claims that colleges need more dollars. They expect higher education to "tighten its belt and become more efficient." Most believe that the belt-tightening can be done without hurting quality.

We are concerned because we see the flow of public money to our colleges and universities diminishing at a time of unprecedented political, social, and economic change. We are concerned that higher education institutions have replaced millions of state tax dollars with the fastest growing special use tax in America—tuition—threatening one of our region's greatest higher education accomplishments—access.

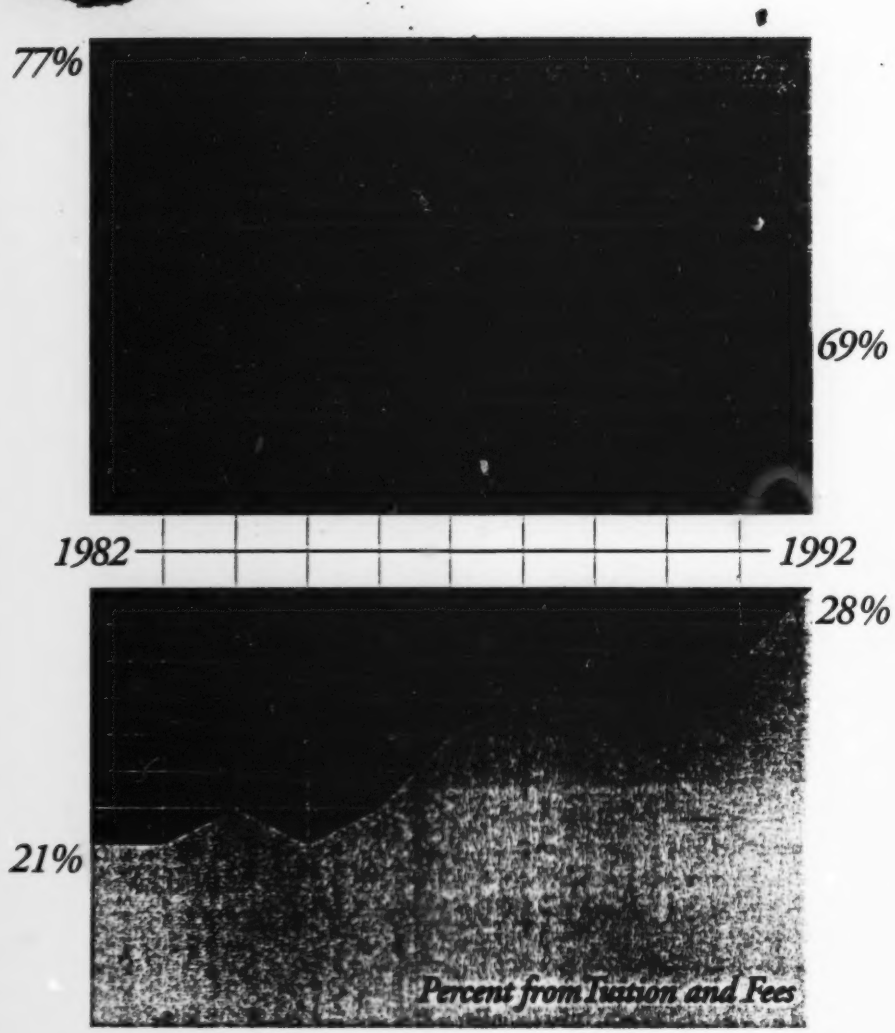
We want to be clear about higher education's financial condition. These are facts:

❖ State and local government spending in the SREB states grew 50 percent from the mid-1980s to 1990; elementary and secondary education spending grew 55 percent; spending for social services increased 63 percent; spending for government administration rose 58 percent; and higher education spending grew by only 38 percent.

❖ The share of state and local government budgets going to colleges and universities over the past five years fell from 9.2 percent to 8.4 percent. This may appear to be a small decline, but it is a loss of $2.2 billion, enough to fund all of public higher education in six SREB states for one year.

WE ARE CONCERNED BECAUSE WE SEE THE FLOW OF PUBLIC MONEY TO OUR COLLEGES AND UNIVERSITIES DIMINISHING AT A TIME OF UNPRECEDENTED POLITICAL, SOCIAL, AND ECONOMIC CHANGE.

The Shift In Public College And University Funding



Between 1982 and 1992, public colleges and universities in the SREB region received less of their support from state budgets and more of their support from tuition. Over the decade, tuition and fees rose from 21 to 28 percent of public college revenues. This means students and their families paid an additional $1.1 billion in tuition and fees.

❖ As the higher education share of state budgets fell, a significant portion of the cost of funding colleges and universities shifted to students and their families. In the last decade, tuition and fees have risen from 21 to 28 percent of public college revenues. This means students and their families are paying an additional $1.1 billion in tuition and fees. The annual tuition bill for students at public colleges and universities has more than doubled in 10 years, and the bill for students at independent colleges and universities has nearly tripled.

Another statistic may be the most telling: Higher education funding in the SREB states, when adjusted for inflation, rose to its highest point in the late 1980s but has now dropped to the 1984 level. Yet enrollments have increased by 600,000 students—or almost 16 percent—since 1984.

Colleges and universities are contending with pinched budgets in a variety of ways: maintaining aging equipment for years longer; deferring building and equipment maintenance; hiring more part-time faculty and fewer full-time professors; reducing the number of books and periodicals purchased for libraries; cutting back on library hours; increasing class sizes; and reducing the available sections of required courses they offer.

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These are traditional cost-cutting techniques in higher education. We may, and should, question whether colleges and universities have scrutinized spending priorities as rigorously as many businesses have been forced to do. But even higher education's toughest critics must concede that, in its current financial condition, higher education is not in the best position to serve growing numbers of students or meet state demands for economic development.

The leaders of our colleges and universities are calling attention to their plight, but few among the public are listening. Budget makers in our state legislatures may hear the concerns of higher education's leaders, but they are confronted by breakneck growth in the costs of criminal justice and indigent health care and are looking for ways to economize. Even with higher education's rising enrollments and budget problems, many legislators have yet to be convinced that higher education is in serious jeopardy. They believe, justifiably or not, that colleges and universities are wasteful and inefficient and need only to follow the example of major corporations: cut expenses and personnel and develop priorities for allocating funds.

Some of the criticisms aimed at higher education are valid. So are some educators' criticisms of short-sighted government and public spending decisions. But we waste time and do not escape the dilemma merely by trying to fix blame.

The difficult financial problems of most state governments probably will continue through the next several years—long enough to be regarded as a fact of life rather than a passing inconvenience. Even if the economy becomes robust sooner than expected, colleges and universities cannot return to their former ways of doing business. America's place in the world is changing, and American colleges and universities are called upon to do the same.

VOICES of AMERICA for HIGHER EDUCATION

"It's not just the future of the next generation of individual Americans that is on the line—it is the future of America itself. Our ability to provide quality higher education will be the most critical factor in determining America's place as a world economic and political leader in the coming decade."

—William H. Gray III
President
United Negro College Fund

"As with consumers of health care, consumers of higher education—individuals, business, government—seek greater value for their dollar. They want to know what they are purchasing in their partnership with higher education."

—Hunter B. Andrews
State Senator, Virginia

How Does Higher Education Need to Change?

In our conversations with groups of citizens around the region, we consistently found strong support for higher education, but we also found skepticism about the priorities of colleges and universities: whether teaching receives the emphasis it should; whether research is overemphasized or under-focused; whether big-time athletics skews institutional perspectives; whether ambitious administrators, faculty, and supporters want to expand institutional missions beyond the state's real needs; and whether the people in charge of our colleges and universities really do all they can do to hold down costs.

We believe higher education must be moved back up on our states' priority lists. To make this happen, higher education's leaders must face more directly the kinds of skepticism and questions that trouble the public. To earn top-priority status, higher education leaders must come forward with the changes they plan to better serve their customers. In return, state leaders need to adopt the approach of cutting-edge corporations—set clear goals and measures of accountability, then provide the resources and flexibility that college and university leaders must have to get a maximum return on investment.

Specific changes will vary from college to college and from state to state. The diversity that is a hallmark of American higher education makes it all but impossible to issue blanket change orders for the enterprise as a whole.

One blanket change is in order, however. Colleges and universities have to respond more directly to the concerns of their customers: students, industry, and government. Time and again we heard complaints about higher education's unresponsiveness—even aloofness—toward those who seek its services.

Giving attention to the concerns of your customers is not the same thing as saying the customer is always right. College and university leaders are not being asked to give up control over their affairs; they are being urged to listen more closely, to respond more fully, to broaden their definition of "quality" to include customer needs. The public—much as it seeks and values higher education—cannot be taken for granted.

The higher education institutions we have built in the last 50 years will have to change substantially if they are to be the ones we need in the next 50. The missions of

public and independent institutions—community and technical colleges, regional and research universities—will continue to change in response to the world about them. But it is not possible or economical to be all things to all people. States have a strong interest in preventing unnecessary duplication, developing clear and sometimes changing missions for each institution, and rewarding colleges and universities that accomplish their goals.

Colleges and universities will have to learn how to use their resources more effectively, beginning with their human resources—faculty, administrators, and support staff. This is not an easy task. Higher education institutions operate collegially, by consensus, rather than hierarchically, with top-down control. Colleges and universities will have to rethink the terms and conditions under which faculties and staff now work. Public institutions may need help from state governments to make these changes possible.

Higher education leaders have already begun to rethink traditional ways of using resources. A case in point can be seen in the planning for a new university in Florida. Leaders there have agreed to invest capital outlay funds in technology that can be used to deliver instruction. These kinds of funds are usually spent on buildings—not on innovative ways to change what goes on inside those buildings.

[How Does Higher Education Need to Change?]

CHANGE THE BALANCE BETWEEN TEACHING AND RESEARCH

To meet the needs of higher education's customers—students, industry, and government—a new balance between teaching and research has to be established. We want to reject straight-off the false choice between research and teaching; we call for balance, not for down-grading research.

Research is important. Our economic well-being, our physical health, the creation of new jobs, the quality of our environment—all these things are directly influenced by research linked to our universities. Too often, however, research has come to dominate the reward systems for higher education faculty. Promotion, retention, salary increases, and tenure all depend too little on the quality of teaching. Faculty in all kinds of institutions—community colleges, comprehensive colleges and universities, and research universities—should be rewarded for excellent teaching.

QUESTIONS RE:

TEACHING & RESEARCH

What incentives promote the right balance between teaching and research?

How is excellent teaching rewarded?

How is state-funded research planned and evaluated?

The tendency of four-year universities to seek "research university" status is one consequence of the imbalance in the reward structure between teaching and research. Efforts to develop new research universities should generally be resisted by governing boards, legislators, and governors.

Boards and state governments need to explore ways to reward faculty and institutions who demonstrate excellent instruction as well as those who do excellent research. Faculty who are productive researchers should spend relatively more time on research, while those who are excellent teachers could spend relatively more time teaching. There are many faculty who are both exceptional teachers and researchers. But at the very least, every faculty member should excel at one or the other. To make this happen the reward system must change.

State-supported research should be carefully planned and evaluated. Support for research must respect the spirit of intellectual creativity that leads researchers to pursue a hunch and come up with a breakthrough. At the same time, we have to always ask if the balance is the right one: Are we doing enough product-oriented research and enough pure research?

It is difficult to anticipate state needs and to assess the potential value of some research. But research supported by the states, either through direct appropriation to universities or indirectly through the funding formulas, needs to be evaluated as carefully as federally funded research—by teams of scholars.

We have great respect for research that is sponsored by the National Science Foundation, the National Institutes of Health, other federal agencies, and private industry. As the respective roles of state and federal governments shift and change over the coming years, support for the major research agendas of the nation must not be diminished by the federal or state governments.

QUESTIONS RE:

WHAT COLLEGES TEACH

Where have faculty taken the lead in redesigning what colleges and universities teach?

What actions are underway to redefine academic priorities and focus resources on them?

How are colleges and universities determining what students need to know and be able to do?

[HOW DOES HIGHER EDUCATION NEED TO CHANGE?]

REDESIGN WHAT COLLEGES AND UNIVERSITIES TEACH

What higher education teaches—the curriculum—needs to be redesigned. Every year the curriculum grows and expands as new courses appear and old ones subdivide. This tendency is not always bad, but too often it becomes "curriculum creep"—unguided and unfocused. Faculties are filled with bright, intellectually curious women and men

who continue throughout their careers to ask new questions, to create new courses, to try new things. It is easier to start a course than to stop one, easier to grow by adding on than by substitution. As in every walk of life, the most difficult decisions involve deciding what good things not to do.

Periodically, colleges and universities see the need to reconsider the curriculum—not only to prune it, but to examine its purposes and its relevance. It is time to do this again.

Fundamental re-evaluation of curricula is not a task for the public or state legislators, but the task of faculties themselves. To assure a place at the head of the decision-making table, faculties must accept collective responsibility for curriculum design.

There is still unnecessary duplication to be eliminated. For a generation or more, legislators and state policymakers have identified duplication among institutions as a major problem. Duplication within institutions also consumes limited resources. The "tyranny of the disciplines" has had its effect, with disciplines sometimes insisting, for instance, that their students must have statistics courses taught for them alone.

Oklahoma's public colleges and universities, working with the state Board of Regents, eliminated 1400 courses and 86 programs in order to better focus limited resources on academic priorities. Seven new programs and nearly 500 new courses were added "to better meet the changing needs of Oklahoma students, business and industry."

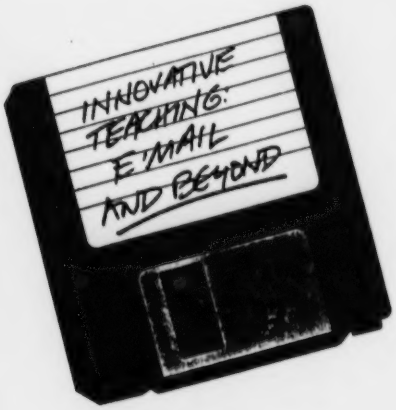
The governing board of Virginia's James Madison University has directed that all academic degree programs and courses be rejustified, and that all courses have clear objectives that can be assessed. The administration's goal is to eliminate at least 15 percent of the current course offerings and establish a 120-credit-hour degree program in all disciplines. In Florida, the Board of Regents has established a range of 120 to 128 hours for a bachelor's degree as part of the state's higher education accountability plan.

Different steps will be needed in different institutions, but we applaud the intent behind these efforts and urge state systems and individual colleges and universities to consider similar activities, in concert with faculty leaders.

Reforms need to recognize the role of accreditation in shaping the curricula. The specialized accrediting bodies—those that accredit particular disciplines or degree programs—often require that substantial numbers of courses be taught. In some cases, these

"There are pressing needs to link institutions of higher education together more efficiently, to equip the classroom for life-long learners, to have teachers drive more effectively down computerized highways of data, and, crucially, to prepare students for a volatile, technological, global economy."

—Catharine R. Stimpson
Director of the Fellows Program
MacArthur Foundation



George Johnson, the president of George Mason University, has described one professor's creative approach to extending teaching capacity and quality.

"An English department chairman has transformed his usual course in American fiction into one that enrolls twice the number of students and teaches them in a more intense and productive way. Doubling the class size and adding a graduate assistant, he lectures once a week. To this he adds the resources of an electronic classroom, using interactive video, hypertext, tapes, etc.

"The class is divided into small groups of about 10 each; each group holds discussions among themselves and reports the minutes of these meetings through electronic mail to a weekly class newspaper. Workshops are

requirements make it difficult to eliminate redundancy, and they create barriers when colleges and universities move to establish norms for the credit hours required for a bachelor's degree.

Attempts in recent years to assess general education have stimulated reforms in some institutions. Yet general education remains ripe for closer scrutiny in most colleges and universities. General education should be organized according to a consensus about what all students should know about themselves and their world. However, we know that a general education cannot be a collection of required courses spread among departments to ensure that each department gets its share of students to teach.

Rethinking the curriculum is never easy. Changes alter patterns of student enrollment. Major changes alter them substantially. The interests of faculty and departments have to be weighed with the needs of students and society. There are only so many faculty members, so many dollars, and so much time available.

If the faculty, the money, and the time are used wisely, colleges and universities can succeed in streamlining the curriculum and focusing on the needs of customers. And the need to use resources wisely grows daily. Even when states decide to make a stronger financial commitment to higher education, growing demands from other public programs will limit available state revenues. Colleges and universities will have to demonstrate to budgetmakers that they are prepared to make tough decisions.

From its earliest days, higher education in America has prepared people for work. Harvard was founded to train ministers and civil servants; as were the College of William and Mary, Yale, and others. Thomas Jefferson's plan for the University of Virginia emphasized the practical arts and sciences.

For many Americans, general education and the study of the liberal arts and sciences are ways of learning skills that are useful throughout life. Thus, both English and physics majors are presumed to have learned sophisticated ways of thinking—inductive, deductive, analogic, and so on—that can be applied in work and citizenship.

But, in fact, we cannot simply assume that college students, merely by taking a certain number of courses, have acquired the thinking skills they will need throughout their lives. The faculties of colleges and universities need to determine what, in their best judgment, students need to know and be able to do upon graduation. And then we need to determine whether these skills and this knowledge have been acquired.

INCREASE THE EMPHASIS ON QUALITY AND PRODUCTIVITY

While a 17th-century physician would find the practice of modern medicine thoroughly befuddling, a teacher from the same century probably would be fairly comfortable with many practices of modern teaching. Every one of the learned professions is undergoing profound change as we adapt to the new realities of global competition, developing technologies, and economic scarcity. The faculty and their institutions may be the last to be shaken from their established practices.

The new information-based economy is characterized by flexibility: specialty products that are made-to-order; inventory control systems that deliver parts just in time for assembly into finished products; workforce teams who can perform a set of procedures, with each individual capable of many tasks; and collective rewards based on team productivity.

We need to consider similar changes in colleges and universities to improve both productivity and quality. The increasing diversity of students alone argues persuasively for rethinking the lock-step systems through which students have to move in pursuit of skills and knowledge.

The teaching model that still dominates higher education supposes that students bring the same knowledge and skills to a course and learn at the same pace and in the same way. Instead of being defined by the results that are expected—what will be learned—the course is defined as three one-hour classes per week for 13 weeks followed by an examination, term paper, or both. Forty or more of these courses, accumulated according to certain rules, equals a bachelor's degree.

Some institutions have moved away from this model. They are beginning to offer credit by examination in selected subject areas, recognizing that there are different ways to become proficient and to demonstrate mastery. As often happens, these strategies actually reflect the practice of an earlier time: that of "sitting for examinations" when the student felt prepared to receive a degree. Other colleges and universities have experimented at the edges with this approach, but more need to make it a significant part of the way they do business.

also conducted electronically, bolstered by regular visits from the professor and his assistant.

"Electronic mail holds the class together. Contact between professor and students is no longer limited to class and office hours. This particular professor logged some 80 hours of computer time in correspondence with students. The students, conferring with the professor or their classmates, logged over 400 hours.

"The professor becomes the navigator who directs each student through the course material and points out the special resources needed. (The library holdings are now available from any office or workstation.) The exchanges are much more intense and serious than they are in a conventional class, and often the most reticent student becomes the most voluble over e-mail.

"To provide the necessary guidance, the professor must have a full command of his subject and be a 'full' professor in the complete sense of the term. One can quickly see how such a format lends itself to larger classes, guided by larger teams of instructors."

Higher education can be made available to the citizens of our states in a number of ways. We see examples of this throughout the SREB region: statewide delivery by television of an MBA in South Carolina and graduate engineering degrees in Virginia; and self-paced computer instruction in Maryland. "Our digital technologies offer the opportunity to address each learner in a style and at a location with which he or she is most comfortable," asserts Robert Heterick, president of EDUCOM: "The problem is not to substitute one model for another, but to find many ways for learning to take place without compromising quality."

Delivering higher education in different ways helps colleges and universities meet the needs of an increasingly complex and technologically sophisticated society. But there is an equally pressing economic reason: In order for colleges and universities to maintain or improve the quality of the services they offer, they must become less labor-intensive.

The economics are simple. Colleges and universities spend about 80 percent of their money on faculty and staff. There are not enough dollars elsewhere in college budgets that can be shifted to pay faculty and staff. New dollars continue in short supply. The costs of living rise. The best way to find dollars for faculty and staff salaries is to extend the effective teaching capacity of faculty. This does not simply mean more lectures or larger classes. Higher education budget problems have already produced these responses in state after state. The best way to extend teaching capacity is to reconsider our present assumptions about teaching and learning.

QUESTIONS RE:

QUALITY AND PRODUCTIVITY

What are the most promising approaches to delivering higher education in different ways and making it less labor-intensive?

How is technology being used to improve teaching and learning? How could it be used?

[How Does Higher Education Need to Change?]

RESPOND MORE DIRECTLY TO JOB MARKET CHALLENGES

The overwhelming concern of students, their families, and employers is jobs: getting them or getting qualified people to fill them. We fear that erosion of public support for funding colleges and universities will continue and even accelerate unless higher education steps up to the challenges of job creation and job readiness.

Research programs of colleges and universities are the breeding grounds of future jobs. Research is the best job-creator. Harvard professor David Birch, who studies the conditions under which entrepreneurial businesses are created and flourish, finds that many begin close to major research universities that stimulate and support them. Birch identifies entrepreneurial hot spots in the nation, several of which are close to research universities in the SREB states.

The United States has developed an economic system in which higher education is the gate to the most rewarding and respected forms of work. It could have been otherwise—we could have developed a system grounded in apprenticeship. But we didn't, for reasons that are understandable given the democratic evolution of our nation.

Workers today need learning skills that will help them to adapt as the knowledge requirements of the workplace change. College graduates, especially, will need advanced knowledge and skills to work effectively in a technologically advanced society. Higher education must focus more sharply on its mission to prepare students for these jobs.

But appropriate education is only part of the jobs problem. Our economy is not creating enough of the right kinds of jobs. The relatively low unemployment rates in most of the SREB states hide pockets of disadvantage. For instance, as many as 50 percent of young African American males in our large cities are unemployed. Reductions in defense industries and efficiency moves throughout industry threaten thousands of skilled and educated professionals. Substantial numbers of jobless workers will not be called back to their old jobs—jobs that now exist somewhere else in the world or do not exist at all.

The community colleges have a particularly prominent role in training and retraining workers for jobs in new industries. The growing success of apprenticeship programs means that two-year colleges will be even more important partners with businesses and schools in technical job training. Surging enrollments in community colleges show that citizens across the country share the belief of market analysts that jobs are most readily available for those who have the mid-level skills to make highly automated factories, offices, hospitals and other institutions operate effectively.

People want higher education to focus more attention on jobs. Whether its mission is primarily teaching or includes cutting-edge research, each college and university needs to come to grips with its role in job readiness or job creation. We make this judgment fully aware of higher education's responsibility to preserve and convey the fullest possible record of human thought and behavior, and its role in helping to shape character and beliefs.

Higher education has always prepared men and women for careers. Colleges and universities are not being asked to take on a new task. They are being asked (as polls about higher education and our own group discussions reflect) to redouble their efforts to help students prepare for and change careers.

Help Wanted

A *Wall Street Journal* reporter invented this fictional want ad, based on interviews with corporate headhunters. It suggests the kinds of students who will get a close look when Fortune 500 companies leaf through job applications.

Wanted: Bilingual college graduates with top grades; multiple internships; one or more years of full-time work; demonstrated leadership, teamwork, and customer service skills; experience living abroad. Must be computer literate. Fluency in Spanish or Mandarin a plus.

Today, language skills are not just for tourists, diplomats, and scholars. Spanish and Mandarin are useful languages in emerging markets. A year abroad is not just a broadening experience; it builds international "people skills." Computer literacy, a proven work ethic, and the ability to perform in a team-oriented corporate environment are becoming entry-level requirements.

The Journal reporter chose not to emphasize major fields of study or degree specialization. He found personnel recruiters most interested in critical-thinking, high achievers with a mix of academic and real-world experiences— whatever their majors. This could give academic planners some sense of how the curriculum might become more relevant and "customer-oriented."

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QUESTIONS RE:

JOB MARKET CHALLENGES

In what ways are colleges preparing students for a changing workplace?

Where are successful examples of higher education's important role in creating jobs?

What partnerships exist between businesses and colleges that link education to real-world learning?

How can colleges and universities respond more directly to the new job market challenges? There are many approaches—some old, some new, some yet to be invented. SREB might work with selected colleges and universities to develop and test curricula designed to give students new ways to acquire skills and knowledge. For example, institutions might redesign programs so that general education and training in technical skills are combined in a student's course of study. The Tech Prep programs under development by community colleges and high schools are another promising approach.

Approaches might be adapted from those who advocate "hands-on/minds-on experiences" or other ways of integrating work experience into university programs. The traditional sciences and humanities can be arranged around experiences where students practice what they are learning. This is akin to some cooperative education programs already in place, where partnerships between businesses and colleges and universities permit students to alternate work and study, thereby learning while doing and paying for higher education at the same time. Linking college education to real-world learning received enthusiastic support during our conversations with groups of citizens.

The approach a state or institution takes is not what is most important—there are many from which to choose. What is important is that colleges and universities respond more directly to the job market challenge and redouble their efforts to help students prepare for and change their careers.

How Can We Better Connect Schools, Colleges, and the Workplace?

Every college and university should connect directly with those institutions on which it depends or which it serves. Any assessment of the effectiveness of higher education institutions should consider the scope and quality of these working connections. The reason is simple and important.

From Headstart to Ph.D., education is all one piece. The world of teaching and learning has a common objective—to develop human potential to the greatest extent possible. Educational systems should enable students to move from experience to experience, from novice to practitioner, with the least possible number of obstacles. Colleges and universities are the institutions to which many women and men come to prepare for work and leadership and to which they are likely to return again and again during their lives. Faculty prepare the teachers and administrators; study the institutions of society, including the schools; and, to a large extent, set the standards for all of education.

Unfortunately, between higher education and the public schools we more often find a chasm than a bridge. The rationale for strong connections between schools and colleges could not be more obvious. In most states, 90 percent of the high school graduates who attend college enroll in their home state. The quality of the entering college class in any state is directly related to the quality of that state's high school programs. Similarly, the overwhelming majority of teachers and administrators in a state's schools are graduates of its colleges. The quality of schools and colleges is unquestionably interlocked.

Why then, in too many states, are there too few working connections among schools and colleges? Why, in many states, have higher education's leaders been notably absent from efforts at public school reform? Why are the higher education programs to prepare teachers and administrators still seen as a weak link in school improvement?

Where there has been involvement, it has often been by faculty from schools of education. The faculties of arts and sciences and the other professional schools have tended to remain distant. This lack of involvement is difficult to understand in light of SREB and state data indicating that as many as one-third of the students who enter college need some remedial work.

Older students who return to learn new skills, new immigrants who come to prepare for a new life, anyone who passes through our institutions to improve themselves

UNFORTUNATELY, BETWEEN HIGHER EDUCATION AND THE PUBLIC SCHOOLS WE MORE OFTEN FIND A CHASM THAN A BRIDGE.

THE RATIONALE FOR STRONG CONNECTIONS BETWEEN SCHOOLS AND COLLEGES COULD NOT BE MORE OBVIOUS.

One way that colleges and universities can help spur school reform is to set clear standards for college admission, says Robert Schwartz of the Pew Charitable Trusts.

Higher education faculty, working nationally through their disciplinary organizations and locally in consultation with teachers in secondary and elementary schools, have an unprecedented opportunity to define what it is that entering freshmen ought to know and be able to do, Schwartz believes.

Faculty members are well-positioned "to strengthen the alignment between what is taught in the schools and what is taught in our colleges and universities," he says. "But the most important function higher education can play in relation to standards setting is to insist, after a reasonable phase-in period, that the standards have teeth."

may need some help with personal and professional transitions. But the remedial problems of young people fresh out of high school are a different issue altogether.

Given the slow pace of public school change, colleges and universities can expect to continue offering remedial courses for some time to come. But doing so consumes tens of millions of dollars that might otherwise be used to teach college courses. How can higher education not be deeply involved in public school reform?

Setting educational standards may be the most important opportunity in this decade for colleges and schools to connect in every state. This effort to determine what students should know and be able to do is unprecedented at both the national and state levels. National standards in the major subjects studied in schools are being developed to link with the national education goals.

Colleges and universities can help give real meaning to standards, especially to those for twelfth-grade students, by more clearly defining important skills and knowledge that entering college freshmen should have. With the ongoing national and state emphasis on establishing standards in mathematics, English, science, history, civics, geography, and the arts, there has never been a better opportunity to strengthen the ties between what is taught and expected in our schools and what is taught and expected in our colleges and universities.

High educational standards have value and consequences. For example, having standards with "teeth" can mean that students who do not meet them may not be admitted to four-year institutions. When Florida and North Carolina set higher standards for college entrance, high school students began to take more challenging courses. Despite considerable concern in North Carolina that African American students would be cut off from the university campuses, high school students of all races made the extra academic effort and met the standards when they went into effect.

Connections among colleges themselves are also increasingly important. Today's students are mobile. They move from two-year to four-year colleges; almost as often, they move from one two-year to another, or from one four-year to another, or, at times, from four-year to two-year. For students to make these moves successfully, the connections between institutions have to work. Higher education has done much in the last two decades to improve the transfer process. But with more students in college, and with significant changes in the employment and mobility of today's citizens, this system must be as seamless as possible.

The seamless fabric of education extends beyond schools, colleges and universities. It includes the use of technology to deliver instruction at hours and places convenient for the consumer. It also includes apprenticeships in the skilled trades, rehabilitative services, corrections education, adult basic literacy and entry-level skills training, and other programs that are important to complex and diverse societies.

For the most part, these programs and services slip right through the holes that unfortunately exist in the education fabric—less-noticed, under-funded, and generally not as well-regarded as "mainstream" schools and colleges. Yet they provide access to the job market for as much as one-fourth of the workforce in many of our states, and the populations they serve are among the most in need. Helping these persons become economically self-sufficient makes particularly good sense at a time when government is hard-pressed to meet all of its obligations.

This, too, is a responsibility of higher education—not just of higher education, of course, and not because higher education knows how to solve all the problems of our society. But colleges and universities are enormously influential institutions and possess intellectual resources brought together in a way found nowhere else in America. They can help patch the holes in the educational fabric.

QUESTIONS RE:

MAKING CONNECTIONS

How are those who teach in high schools and colleges working together to strengthen the connections between what is required in schools and colleges?

How are colleges changing programs that prepare teachers and administrators to implement new educational reforms?

What will make the process for students to transfer among colleges and universities in your state more customer-oriented?

Can Colleges and Universities Be Flexible *and* Accountable?

College and university leaders should be given wide latitude to do their jobs, and their performance and that of their institutions should be assessed using standards agreed upon in advance. Such standards should be appropriate to their missions and might include graduation and job placement rates as well as examinations of students at various points in their studies. But the standards will differ for every kind of institution—community college, comprehensive college or university, or research university—and, to some extent, according to each institution's unique character.

Determining how success will be measured may turn out to be less grueling than unraveling the bureaucracy that ensnares higher education and state government. The tedious documentation procedures of government agencies can bring reformers to their knees in despair, and the kinds of change we are suggesting cannot be copied in triplicate and submitted months in advance for review.

Every college and university has its own internal procedural snarls through which change is forced to go. Institutions cannot be innovative unless they are willing to let loose of the old ways of doing business. College leaders need to offer flexibility to faculty and staff just as they expect it from state governments—and require the same kind of accountability.

James R. Mingle, executive director of the State Higher Education Executive Officers, wrote in a recent *Voices of America* essay that "the accountability devices used today—including rules, mandates, reporting requirements and funding systems—seldom promote quality, at least not a definition of quality that focuses on adding value and meeting customer expectation."

The complex institutions of modern society cannot operate effectively if every transaction has to be approved before it is undertaken. The focus has to be on substantive results, not on more efficient pre-audits and post-audits. States have sophisticated information management systems that can stop the paper chases between campuses and the capital. States can assure flexibility and protect the public interest by rewarding success, learning from failure, and holding institutions accountable.

Questions re:

Flexibility

What standards of performance are required of colleges and universities? What should be?

What state policies are barriers to flexibility in colleges and universities?

What actions are underway to reward successes and give flexibility?

Does Your State's Funding for Higher Education Make Sense?

States need to set clear policies concerning the shared responsibility of government, on the one hand, and students and their families, on the other, to pay the costs of college education. During the recent recession, many states shifted funding from higher education. To compensate, public colleges and universities have raised tuition and fees. Consumers have had little choice but to pay higher tuition or seek out less expensive institutions because, while graduating from college no longer guarantees a good job, not going to college almost guarantees a low-paying one.

If state leaders stop or reverse the decline in higher education's priority in the state budget, many will still be asking colleges and universities to stretch the resources they have. High school graduates are slated to increase in most states in the region, especially in Florida, Georgia, Maryland, South Carolina, and Virginia—but elsewhere as well.

Colleges and universities can accommodate these increases and maintain or improve quality only if they change the ways they do business. If they simply wedge more students into crowded lecture halls, increase the number of courses taught by graduate students, or abandon essays in favor of multiple-choice examinations, the quality of teaching and learning will diminish rapidly.

Everyone wants the quality of higher education to stay high. Many things may have to change to achieve that end. We encourage state leaders and educators to be stubborn in pursuit of excellence and highly creative about how to achieve it.

State leaders can do much more to use the leverage they have in dealing with higher education. They need to be able to reward behavior that leads to change and, by withholding rewards, to discourage behavior that doesn't. Thus far, we see too little evidence of states using their leverage effectively to improve both access and quality.

One form of leverage is money. Each state should consider creating a pool of new dollars from which to provide incentives for desired changes. We are not prepared to say how much incentive money there should be in each state, but it seems reasonable to consider 5 or 10 percent of the educational appropriation for each system of higher education.

Such funds already exist. Tennessee has a higher education incentive fund and so does Virginia, although its "Fund for Excellence" is too small to be an effective tool for

We believe that higher education's priority in state budgets should rise in most states during the remainder of this decade.

WE ARE CERTAIN THAT THE LEVEL OF HIGHER EDUCATION FUNDING NEEDS TO BE A CONSCIOUS DECISION OF STATE LEADERS AND NOT AN AFTERTHOUGHT BASED ON WHAT IS LEFT IN THE STATE'S BUDGET.

change. Ohio and New Jersey had funds that were dismantled when budgets turned sour—a valuable cautionary note because such incentives can be most useful precisely in these difficult times.

- The form chosen by each state will vary, but some portion of the higher education budget should be set aside to reward institutions that take the risks associated with real change and, by doing so, achieve greater productivity and quality.

To move toward funding productivity and quality, states should determine that after years of discussion, they will take a significant step away from their heavy reliance on enrollment-driven funding. Enrollments need to be a factor, but other factors, tied more closely to the goals and missions of institutions, need to play a larger role. Institutions with different missions should receive budgetary support that directly reflects the results they can show or the importance attached to a particular program or service.

There are numerous ways to exert budget leverage and we urge governors and legislators to use them all. We know that governors and legislators do consider issues of higher education costs, tuition levels, incentive funds, and productivity. But these matters too often take a backseat when the pressure builds to approve the state budget.

We know how state budgeting works, and for this reason we urge states to set goals for funding higher education. Goals will vary, but they should all address the fact that a shrinking portion of most state budgets has been going for higher education. Each state should review its trends for funding higher education and consciously determine the appropriate level of higher education funding.

We believe that higher education's priority in state budgets should rise in most states during the remainder of this decade. We are certain that the level of higher education funding needs to be a conscious decision of state leaders and not an afterthought based on what is left in the state's budget.

Whatever the level of funding for colleges and universities, states will need to place even greater emphasis on sharing resources within higher education. While some unnecessary duplication has been eliminated, there is still too much within and among institutions, and among state systems. What can we do cooperatively? How can states share computer networks, distance learning, and other resources, both within their own borders and among other states in the region?

SREB has an admirable history of resource-sharing, beginning with contracts for professional programs and the Academic Common Market. An SREB fellowship program to increase the numbers of minority students earning Ph.D.'s is now underway, demonstrating clearly that several states together can do what no one state could do alone.

The challenge to SREB and state leaders is to find more ways to share costs and resources and make higher education leaner, more efficient, and still responsive to the needs of their citizens.

QUESTIONS RE:

FUNDING

In the final analysis, how are funding levels for higher education set in your state? How should they be set?

What does your current higher education funding method reward? What should it reward?

In what ways are colleges and universities sharing resources?

WE URGE YOU TO HELP BRING THE PRINCIPAL PARTIES TOGETHER IN YOUR STATE TO CONSIDER WHAT YOUR STATE CAN DO.

WHAT DO WE DO FIRST?

STATE LEADERSHIP FOR HIGHER EDUCATION

If you believe as we do that—

- Higher education is a major asset but its value in an uncertain world is not sufficiently understood;
- The declining priority of higher education in state budgets poses real problems for our future;
- Higher education must change in important, fundamental ways;
- There needs to be a new and better balance in higher education, especially between teaching and research;
- Colleges and universities need to rethink what they teach and the ways in which they deliver instruction;
- Constantly rising and high tuition is a serious threat to access and imperils both the individual student and all of us;
- Better connections must exist among our schools, colleges, and businesses;
- There are important ways for higher education institutions to share within each state and across state lines

—and if you believe that SREB states can be huge winners in the global economic realignment if we act wisely, then we urge you to help bring the principal parties together in your state to consider what your state can do.

You can begin by bringing together leadership from public and independent colleges and universities, business and industry, the schools, state government, and the public to consider the level of support for higher education in your state and the changes that higher education must make.

Each state should choose its own best forum. In some, this might be a group of higher education leaders, business and industry leaders, and representatives of key school and citizen groups, brought together by the executive branch to frame specific suggestions. In other states, this might be a special task group or working conference developed by the state's higher education board. In still other states, it could be a study group created by the legislature to develop suggestions for legislative action.

Whatever way you choose, we urge you to help colleges and universities get the support—and make the changes—they need.

CHANGING STATES

HIGHER EDUCATION AND THE PUBLIC GOOD

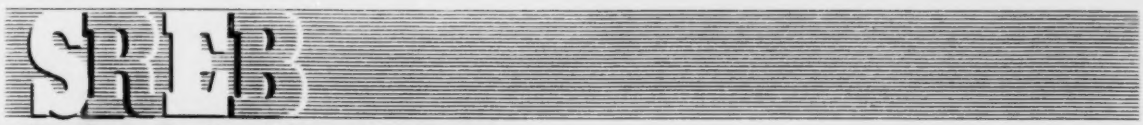
State-by-State Background Data

for more information, contact:

Joe Marks

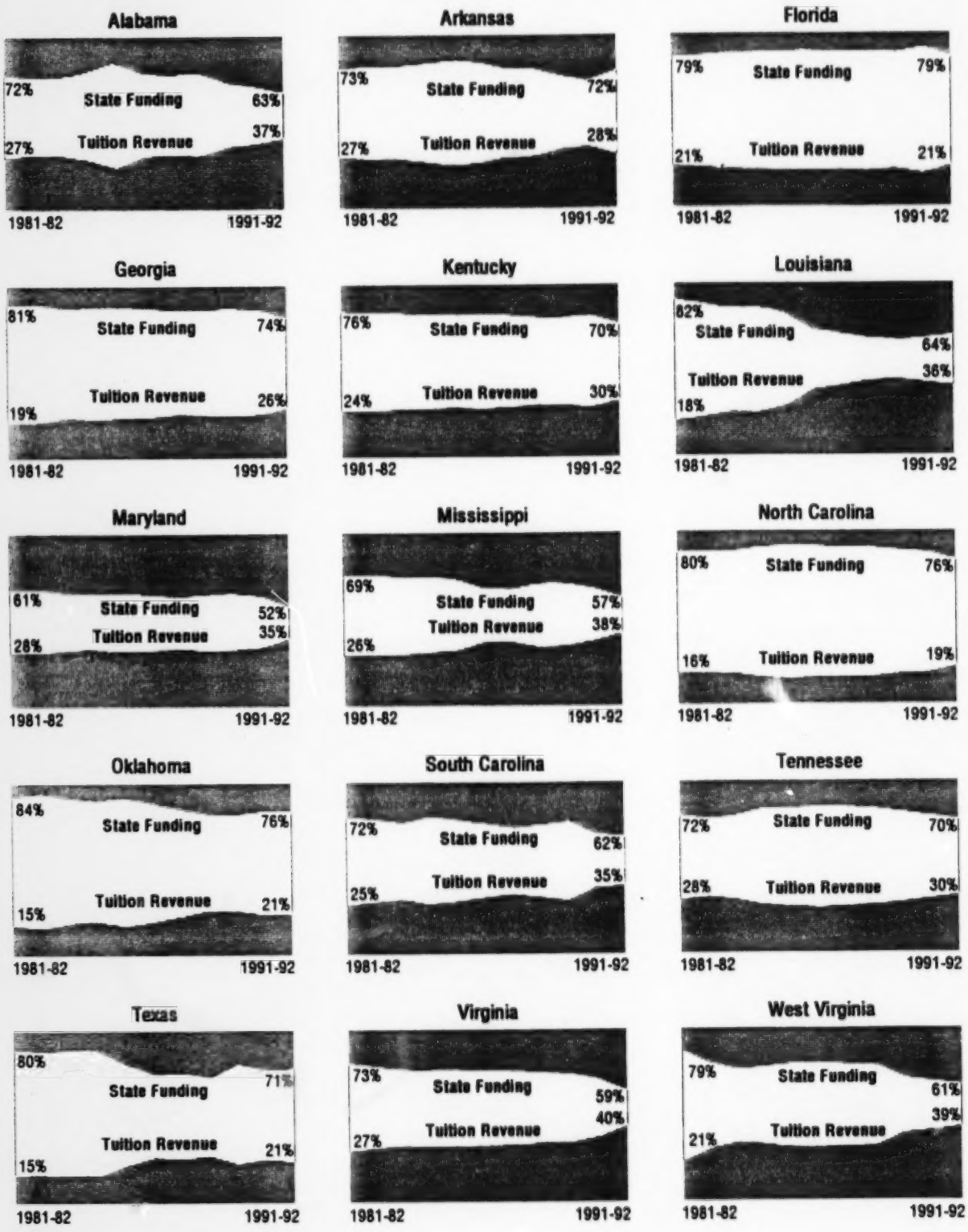
SREB Associate Director for Data Services

(404) 875-9211



Southern Regional Education Board

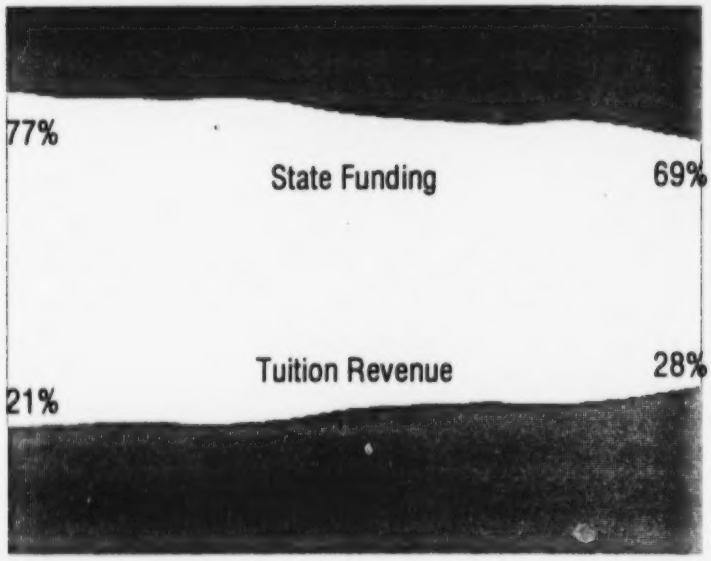
Shifts in Public Higher Education Funding



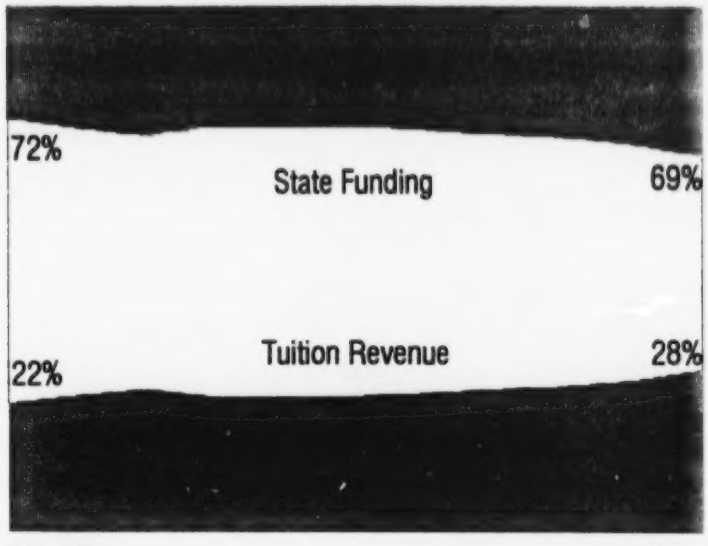
SOURCE: Derived from D. Kent Halstead, *State Profiles: Financing Public Higher Education.*

Shifts in Public Higher Education Funding

SREB Region



United States



SOURCE: Derived from D. Kent Halstead, *State Profiles: Financing Public Higher Education.*

Background Data on Higher Education for "Changing States"

[numbers refer to tables in this packet]

ACCOMPLISHMENTS

1. Per capita personal income has grown from 79 percent to 90 percent of the national average since 1961 (*Changing States*, p. 7).
2. The region's unemployment rate is below the nation's (*Changing States*, p. 7).
3. The share of our citizens who have four or more years of college has grown dramatically, from about 7 percent in 1960 to nearly 20 percent today (*Changing States*, p. 8).
4. For every African American student who attended college in 1960, seven are now enrolled (*Changing States*, p. 8).
5. Colleges enroll nearly one-third of the students who attend college in the U.S.—up from one-fourth in 1960 (*Changing States*, p. 8).
6. The share of federal research dollars grew from about 18 percent in 1966 to nearly 27 percent in 1990 (*Changing States*, p. 8).
7. There were only 91 physicians for every 100,000 residents in 1960. That ratio has doubled and is nearer the national average (*Changing States*, p. 8).
8. More than 23 million new jobs were created over the last three decades, a rate of job growth that exceeded the national growth in every major job category. The expansion of manufacturing alone added 2.3 million jobs, while manufacturing jobs declined elsewhere in the nation (*Changing States*, p. 8).

CONCERNS

9. Personal income remains below the national average (*Changing States*, p. 8).
10. Infant mortality rates and the number of children living in poverty are the highest of any region (*Changing States*, p. 8).
11. The college-going rate is the lowest in the nation (*Changing States*, p. 8).
11. Too few minorities earn college degrees (*Changing States*, p. 8).

DISTURBING HIGHER EDUCATION TRENDS

12. State and local government spending in the SREB states grew 50 percent from the mid-1980s to 1990; elementary and secondary education spending grew 55 percent; spending for social services increased 63 percent; spending for government administration rose 58 percent, and higher education spending grew by only 38 percent (*Changing States*, p. 13).
13. The share of state and local government budgets going to colleges and universities over the past five years fell from 9.2 percent to 8.4 percent. This may appear to be a small decline, but it is a loss of $2.2 billion, enough to fund all of public higher education in six SREB states for one year (*Changing States*, p. 13).
14. As the higher education share of state budgets fell, a significant portion of the cost of funding colleges and universities shifted to students and their families. In the last decade, tuition and fees have risen from 21 percent to 28 percent of public college revenues. This means students and their families are paying an additional $1.1 billion in tuition and fees (*Changing States*, p. 14).
15. The annual tuition bill for students at public colleges and universities has more than doubled in 10 years, and the bill for students at independent colleges and universities has nearly tripled (*Changing States*, p. 14).
16. Higher education funding in the SREB states, when adjusted for inflation, rose to its highest point in the late 1980s but has now dropped to the 1984 level (*Changing States*, p. 14).
17. Yet enrollments have increased by 600,000 students—or almost 16 percent—since 1984 (*Changing States*, p. 14).

Per Capita Personal Income

	Percent of United States Average			
	1961	1971	1981	1991
United States	–	–	–	–
SREB States	79	85	91	90
Alabama	68	74	77	81
Arkansas	65	71	75	77
Florida	88	98	99	99
Georgia	75	84	84	91
Kentucky	74	78	81	82
Louisiana	75	76	90	79
Maryland	107	111	109	116
Mississippi	57	65	70	70
North Carolina	72	80	81	88
Oklahoma	84	85	97	81
South Carolina	64	75	76	81
Tennessee	73	79	80	86
Texas	87	89	102	90
Virginia	86	93	99	105
West Virginia	72	78	78	75

SOURCES: U.S. Bureau of Economic Analysis.

Civilian Labor Force Status

(in thousands, seasonally adjusted)

	October 1993			
	Labor Force			
	Total	Employed	Unemployed	Unemployment Rates
United States	128,714	119,928	8,786	6.8
SREB States	43,070	40,260	2,808	6.5
SREB States as a Percent of U.S.	33.4	33.6	31.2	93.2
Alabama	1,938	1,806	132	6.8
Arkansas	1,165	1,092	72	6.2
Florida	6,620	6,152	467	7.1
Georgia	3,339	3,158	182	5.4
Kentucky	1,763	1,647	116	6.6
Louisiana	1,867	1,727	140	7.5
Maryland	2,658	2,491	167	6.3
Mississippi	1,209	1,138	71	5.9
North Carolina	3,493	3,324	169	4.8
Oklahoma	1,528	1,438	90	5.9
South Carolina	1,813	1,685	128	7.1
Tennessee	2,503	2,372	130	5.2
Texas	9,093	8,412	681	7.5
Virginia	3,302	3,119	184	5.6
West Virginia	779	699	79	10.2

SOURCES: U.S. Bureau of Labor Statistics.

Percent of Population Aged 25 and Above with Four or More Years of College

	1960	1990
United States	7.7	20.3
SREB States	6.9	18.6
SREB States as a Percent of U.S.	89.6	91.6
Alabama	5.7	15.7
Arkansas	4.8	13.3
Florida	7.8	18.3
Georgia	6.2	19.3
Kentucky	4.9	13.6
Louisiana	6.7	16.1
Maryland	9.3	26.5
Mississippi	5.6	14.7
North Carolina	6.3	17.4
Oklahoma	7.9	17.8
South Carolina	6.9	16.6
Tennessee	5.5	16.0
Texas	8.0	20.3
Virginia	8.4	24.5
West Virginia	5.2	12.3

SOURCES: U.S. Bureau of the Census.

Headcount Enrollment of Black Students

	1976	1990	Percent Change 1976 to 1990
United States	1,034,680	1,225,252	18.4
SREB States	435,085	560,372	28.8
SREB States as a Percent of U.S.	42.1	45.7	
Alabama	33,001	42,916	30.0
Arkansas	10,181	12,188	19.7
Florida	39,898	53,400	33.8
Georgia	30,965	49,199	58.9
Kentucky	9,564	10,491	9.7
Louisiana	35,943	44,738	24.5
Maryland	36,959	44,292	19.8
Mississippi	29,367	33,699	14.8
North Carolina	47,392	62,032	30.9
Oklahoma	9,505	11,816	24.3
South Carolina	25,416	31,177	22.7
Tennessee	26,429	31,240	18.2
Texas	61,147	80,458	31.6
Virginia	35,841	49,566	38.3
West Virginia	3,477	3,160	−9.1

SOURCES: National Center for Education Statistics.

Enrollment Growth

(public and independent)

	1959	1984	1990	No. Times Increased 1959 to 1991	Increase 1984 to 1991	Percent Increase 1984 to 1991
United States	3,639,847	12,400,392	13,871,725	3.8	1,471,333	12
SREB States	873,661	3,520,677	4,095,628	4.7	574,951	16
SREB States as a Percent of U.S.	24.0	28.4	29.5		39.1	
Alabama	46,397	171,631	217,550	4.7	45,919	27
Arkansas	24,371	78,777	90,425	3.7	11,648	15
Florida	70,788	444,062	538,389	7.6	94,327	21
Georgia	49,054	196,869	251,810	5.1	54,941	28
Kentucky	45,360	143,555	177,852	3.9	34,297	24
Louisiana	54,958	179,988	186,599	3.4	6,611	4
Maryland	59,267	234,302	259,700	4.4	25,398	11
Mississippi	34,501	104,339	122,883	3.6	18,544	18
North Carolina	68,500	309,249	351,990	5.1	42,741	14
Oklahoma	57,836	168,034	173,221	3.0	5,187	3
South Carolina	30,875	131,479	159,302	5.2	27,823	21
Tennessee	59,887	200,937	226,238	3.8	25,301	13
Texas	185,518	795,337	901,437	4.9	106,100	13
Virginia	57,511	283,109	353,442	6.1	70,333	25
West Virginia	28,838	79,009	84,790	2.9	5,781	7

SOURCES: National Center for Education Statistics.

Federal Support for Research and Development to Colleges and Universities Receiving the Largest Amounts

	Federal Obligations (000s)			
	Fiscal 1966	Fiscal 1986	Fiscal 1990	Rank 1990
Total to All Institutions	$1,257,719	$6,456,743	$9,031,047	—
Total to Top 100 Institutions	728,000	5,513,821	7,631,328	—
Total to Top 10 Institutions	372,644	1,559,570	2,148,731	—
Johns Hopkins University (Maryland)*	20,294	331,317	470,935	1
Stanford University (California)	43,348	180,186	247,992	2
Massachusetts Institute of Technology	57,227	188,120	218,318	3
University of Washington	21,262	146,718	217,291	4
University of California–Los Angeles	36,067	125,483	176,735	5
University of Michigan	46,362	111,232	176,620	6
University of California–San Francisco	9,434	104,453	167,270	7
University of California–San Diego	15,406	133,243	165,224	8
University of Wisconsin–Madison	23,392	120,626	155,175	9
Columbia University (New York)	40,429	127,131	153,171	10
Total to All SREB Institutions	233,906	1,768,462	2,418,635	
SREB as a Percent of U.S.	18.6	27.4	26.8	
Total to SREB Institutions Ranked 11–100	184,062	1,019,941	1,460,536	
Duke University (North Carolina)	12,100	70,034	116,109	21
University of North Carolina at Chapel Hill	8,121	70,526	100,183	25
University of Texas at Austin	20,930	74,028	93,401	27
University of Alabama at Birmingham	4,545	45,856	74,529	32
Baylor College of Medicine (Texas)	7,522	47,022	72,260	33
Vanderbilt University (Tennessee)	6,889	43,990	70,585	35
University of Maryland, College Park	14,130	53,906	64,723	41
University of Miami (Florida)	9,354	37,618	63,707	42
University of Virginia	6,025	39,136	60,796	46
University of Florida	11,588	48,911	56,063	49
Georgia Institute of Technology	2,990	46,557	54,271	50
University of Texas SW Medical Center at Dallas	–	40,330	50,504	54
Emory University (Georgia)	4,312	30,981	49,581	57
Texas A & M University	4,952	35,891	47,221	58
University of Tennessee (all campuses)	8,065	15,497	44,759	61
North Carolina State University at Raleigh	8,047	27,482	43,466	66
Virginia Commonwealth University	–	26,598	42,678	67
University of Maryland, Baltimore Professional School	–	24,574	41,100	70
Louisiana State University	7,417	31,510	40,886	71
University of Georgia	4,594	32,267	39,767	74
University of Texas Health Science Center at San Antonio	–	21,504	33,306	81
Virginia Polytechnic Institute and State University	6,083	23,363	32,239	82
University of Texas Anderson Cancer Center	–	20,576	30,650	85
University of Texas Health Science Center at Houston	–	22,588	29,943	86
University of Kentucky	5,679	22,394	29,375	87
Wake Forest University (North Carolina)	3,554	17,480	29,019	88
Florida State University	4,647	21,418	27,531	92
Tulane University (Louisiana)	8,852	12,522	21,884	100

SOURCE: National Science Foundation.

Medical Schools and M.D. to Population Ratios

	Number of Medical Schools				Physicians per 100,000			
	1960	1970	1980	1986	1960	1970	1980	1986
United States					119	137	183	199
SREB States	26	27	35	39	91	105	150	169
SREB States as a Percent of U.S.					76.5	76.6	82.0	84.9
Alabama	1	1	2	2	72	84	125	143
Arkansas	1	1	1	1	84	85	121	138
Florida	2	2	3	3	100	125	179	192
Georgia	2	2	2	2	87	101	141	160
Kentucky	1	2	2	2	84	96	132	152
Louisiana	2	2	3	3	107	114	155	174
Maryland	2	2	2	2	129	171	266	305
Mississippi	1	1	1	1	72	78	106	120
North Carolina	3	3	4	4	88	103	151	170
Oklahoma	1	1	1	1	91	95	127	139
South Carolina	1	1	1	2	74	85	132	149
Tennessee	3	3	3	4	100	113	156	177
Texas	3	3	6	7	94	110	151	160
Virginia	2	2	3	3	95	113	171	196
West Virginia	1	1	1	2	84	98	134	157

SOURCES: American Medical Association.

Employees on Nonfarm Payrolls by Major Industry

(000s, not seasonally adjusted)

	Total		Mining, Construction		Manufacturing		Transportation, Public Utilities, Government		Wholesale/Retail Trade, Service Finance, Insurance, Real Estate	
	April 1960	April 1993	April 1960	April 1993	April 1960	April 1993	April 1960	April 1993	April 1960	April 1993
United States	53,076	109,547	3,289	4,954	16,408	17,751	12,554	24,830	20,825	62,012
SREB States	13,302	36,522	1,203	2,054	3,593	5,893	3,424	8,791	5,029	20,093
SREB States as a Percent of U.S.	25.1	33.3	87.0	38.8	21.9	33.2	54.0	70.5	24.1	32.4
Alabama	759	1,696	54	87	239	381	211	428	256	800
Arkansas	363	982	25	42	101	242	102	229	135	470
Florida	1,310	5,474	123	281	207	479	323	1,178	657	3,537
Georgia	1,026	3,041	59	131	338	545	265	745	364	1,620
Kentucky	635	1,527	61	95	170	290	163	365	241	1,077
Louisiana	776	1,618	95	143	141	181	231	441	310	853
Maryland	884	2,065	63	110	256	179	222	520	343	1,255
Mississippi	399	982	29	42	119	252	115	271	135	426
North Carolina	1,153	3,189	66	150	494	836	233	679	361	1,525
Oklahoma	568	1,223	78	75	87	164	182	343	222	641
South Carolina	560	1,560	39	83	239	368	121	366	161	743
Tennessee	887	2,258	52	91	309	517	200	482	326	1,170
Texas	2,512	7,411	290	511	492	978	665	1,827	1,056	4,096
Virginia	1,012	2,849	91	156	273	400	282	746	366	1,547
West Virginia	457	647	78	59	128	82	110	171	141	336

SOURCES: U.S. Bureau of Labor Statistics.

Infant Mortality and Children Living in Poverty

	Infant Mortality Rate per 100,000 Live Births 1990	Percent of Children Under 18 Living in Poverty 1991
United States	9.2	19.8
SREB States	10.2	23.6
SREB States as a Percent of U.S.	110.9	119.2
Alabama	10.8	26.7
Arkansas	9.2	26.4
Florida	9.6	22.1
Georgia	12.4	23.3
Kentucky	8.5	22.0
Louisiana	11.1	33.8
Maryland	9.5	13.5
Mississippi	12.1	34.0
North Carolina	10.6	18.0
Oklahoma	9.2	21.3
South Carolina	11.7	22.5
Tennessee	10.3	26.2
Texas	8.1	24.0
Virginia	10.2	14.4
West Virginia	9.9	25.9

SOURCES: U.S. Bureau of the Census and National Center for Health Statistics.

Estimated College Enrollment Rates by Age

	Percent of Age Group Enrolled in College							
	18 to 24 Years		25 to 34 Years		35 and Over		18 and Over	
	1987	1989	1987	1989	1987	1989	1987	1989
United States	26.1	–	7.1	–	5.4	–	10.4	–
SREB States*	23.4	25.6	6.1	6.5	5.0	7.2	9.9	10.4
Alabama	24.6	29.6	5.4	6.0	4.4	6.6	9.9	9.4
Arkansas	18.1	21.4	4.4	4.6	3.1	4.5	7.0	6.7
Florida	22.2	23.8	6.5	7.1	4.2	6.0	8.7	9.4
Georgia	19.7	–	4.5	–	3.7	–	7.7	–
Kentucky	21.0	23.9	5.5	5.7	4.4	6.5	8.9	9.2
Louisiana	21.8	23.1	4.4	4.8	4.2	6.3	8.4	8.5
Maryland	23.7	24.9	7.8	8.1	6.4	9.2	11.5	13.1
Mississippi	22.3	24.9	4.7	5.1	3.9	5.7	8.6	8.0
North Carolina	25.8	28.4	6.0	6.3	4.9	7.1	10.3	10.1
Oklahoma	25.8	–	7.9	–	4.7	–	8.9	–
South Carolina	–	–	–	–	–	–	–	–
Tennessee	22.4	24.2	5.4	5.8	4.3	6.3	8.9	9.1
Texas	24.2	26.3	6.7	7.1	6.4	9.3	11.5	12.7
Virginia	25.4	27.6	6.8	7.0	5.8	8.3	11.2	11.6
West Virginia	22.6	25.9	5.1	5.0	3.6	5.3	8.1	7.9

* States where "–" appears in either year are not included in the regional rates.

"–" indicates data not shown because the number of students whose age is unknown exceeded 5 percent.

NOTES: This table illustrates one method of estimating college attendance rates based on National Center for Education Statistics and U.S. Bureau of the Census data. "College" includes only two-year or four-year institutions offering an associate or higher degree. The population data upon which these rates are based include all persons residing in a state more than six months a year, including college students. The enrollment counts include all students enrolled in a state, regardless of state of origin.

SOURCES: U.S. Bureau of the Census and National Center for Education Statistics.

Bachelor's Degrees Awarded to Black Students

	1989-90			Total Percent Change 1984-85 to 1989-90	Percent of Total Bachelor's Degrees	
	Total	Percent by Predominantly Black Institutions	Percent by Historically Black Institutions		1984-85	1989-90
United States	59,301	28.7	26.6	3.0	5.8	5.8
SREB States	30,423	46.2	46.0	6.1	10.2	10.1
SREB States as a Percent of U.S.	51.3					
Alabama	2,318	46.3	46.3	−7.8	15.4	13.6
Arkansas	713	44.2	44.2	−2.3	10.2	9.6
Florida	2,319	30.3	30.3	−0.8	7.5	6.6
Georgia	3,118	51.7	46.4	24.3	13.6	14.6
Kentucky	493	na	15.2	20.8	3.5	4.1
Louisiana	2,966	62.1	62.1	9.8	16.8	18.7
Maryland	2,132	40.1	38.0	21.0	11.2	11.6
Mississippi	1,852	62.1	62.1	−6.4	22.9	21.3
North Carolina	3,855	60.2	60.2	4.6	14.7	14.1
Oklahoma	600	22.2	22.2	3.6	4.4	4.4
South Carolina	1,880	45.9	45.9	4.0	14.5	14.2
Tennessee	1,632	37.9	37.9	−5.4	10.1	9.5
Texas	3,382	26.7	26.7	7.5	5.6	5.7
Virginia	2,946	57.0	57.0	15.6	10.6	10.9
West Virginia	217	na	30.4	−5.2	2.9	2.9

"na" indicates not applicable. There is no institution of this type in the state.

NOTE: "Historically Black" institutions are included in the "Predominantly Black" category if, and only if, black students are more than 50 percent of the current enrollment.

SOURCES: National Center for Education Statistics.

Growth in State and Local Government Expenditures

	Percent Change, 1984-85 to 1989-90				
	Total	Elementary and Secondary Education	Social Welfare and Income Maintenance	Administration	Higher Education
United States	48.3	53.1	51.9	55.3	40.3
SREB States	50.1	54.9	62.6	58.2	37.6
Alabama	36.5	44.0	58.4	33.9	43.9
Arkansas	33.8	20.7	51.3	30.5	37.0
Florida	77.8	84.4	84.6	86.9	56.5
Georgia	56.6	84.5	68.0	69.6	29.7
Kentucky	41.9	35.6	59.0	40.5	47.4
Louisiana	21.3	31.7	23.1	13.9	13.8
Maryland	59.4	65.7	64.7	88.8	41.6
Mississippi	39.0	55.7	38.2	54.3	46.8
North Carolina	59.9	66.1	96.2	67.9	44.7
Oklahoma	23.6	20.4	41.8	33.9	22.5
South Carolina	66.0	69.9	87.5	86.1	45.2
Tennessee	45.5	46.9	52.6	65.1	58.2
Texas	41.1	43.8	57.3	41.7	20.5
Virginia	67.9	70.1	68.0	80.8	56.3
West Virginia	20.8	6.7	53.7	10.2	36.3

SOURCE: U.S. Bureau of the Census.

Public Higher Education Share of Total State and Local Government Expenditures and Dollar Value of Change in Higher Education Share

	Higher Education			
	1984-85	1989-90	Share Gained or Lost 1984-85 to 1989-90	Dollar Value of Share Change* (millions)
United States	7.9 %	7.5 %	−0.4	−$4,156
SREB States	9.2	8.4	−0.8	−2,157
Alabama	9.9	10.5	0.5	69
Arkansas	9.7	9.9	0.2	14
Florida	6.5	5.7	−0.8	−361
Georgia	7.9	6.6	−1.4	−311
Kentucky	9.4	9.8	0.4	39
Louisiana	7.4	7.0	−0.5	−66
Maryland	8.8	7.8	−1.0	−184
Mississippi	10.1	10.7	0.6	43
North Carolina	11.8	10.7	−1.1	−250
Oklahoma	10.0	9.9	−0.1	−8
South Carolina	10.5	9.2	−1.3	−157
Tennessee	7.4	8.1	0.6	110
Texas	10.7	9.2	−1.6	−864
Virginia	10.4	9.7	−0.7	−153
West Virginia	7.6	8.6	1.0	53

NOTE: Number of dollars gained or lost had the 1989-90 share been the same as the 1984-85 share.

SOURCE: U.S. Bureau of the Census.

Shifting Sources of Public Higher Education Funding

	State Funds		Net Tuition	
	1981-82	1991-92	1981-82	1991-92
United States	72 %	66 %	22 %	28 %
SREB States	77	69	21	28
Alabama	72	63	27	37
Arkansas	73	72	27	28
Florida	79	79	21	21
Georgia	81	74	19	26
Kentucky	76	70	24	30
Louisiana	82	64	18	36
Maryland	61	52	28	35
Mississippi	69	57	26	38
North Carolina	80	76	16	19
Oklahoma	84	76	15	21
South Carolina	72	62	25	35
Tennessee	72	70	28	30
Texas	80	71	15	21
Virginia	73	59	27	40
West Virginia	79	61	21	39

* "Unrestricted Revenues" for public higher education are the sum of: (1) state general purpose appropriations excluding funds for research, agriculture, and medicine; (2) local appropriations; and (3) net tuition revenues [total tuition revenues minus student aid].

SOURCE: D. Kent Halstead. Research Associates of Washington.

Median Annual Undergraduate Tuition and Required Fees Public Four-Year Universities*

	1982-83	1992-93
SREB States	$840	$1,768
Alabama	990	1,912
Arkansas	720	1,838
Florida	795	1,664
Georgia	1,107	2,175
Kentucky	812	1,998
Louisiana	798	2,573
Maryland	1,185	2,778
Mississippi	1,132	2,473
North Carolina	692	1,268
Oklahoma	708	1,768
South Carolina	1,190	2,818
Tennessee	867	1,898
Texas	490	1,396
Virginia	1,316	3,714
West Virginia	840	1,928

* Universities awarding at least 100 doctoral degrees which are distributed among at least 10 broad fields with no more than half in any one broad field.

SOURCE: SREB-State Data Exchange.

Appropriations of State Tax Funds for Higher Education Operating Expenses

(constant 1992 dollars in thousands)

	1983-84	1985-86	1987-88	1989-90	1991-92	1993-94
United States	$37,845,916	$40,702,804	$41,875,019	$42,525,600	$40,100,696	$38,275,484
SREB States	13,182,261	13,806,165	13,710,656	14,212,487	13,205,216	13,447,293
SREB States as a Percent of U.S.	34.8	33.9	32.7	33.4	32.9	35.1
Alabama	657,397	915,810	815,388	844,487	818,760	837,429
Arkansas	288,537	396,291	346,036	348,621	383,108	388,116
Florida	1,401,342	1,496,372	1,663,866	1,693,115	1,443,318	1,479,411
Georgia	833,744	882,690	924,203	961,952	874,320	971,409
Kentucky	585,683	573,234	602,358	598,404	639,422	591,984
Louisiana	735,649	714,823	601,821	573,078	589,209	532,780
Maryland	639,054	704,559	747,981	894,175	716,722	705,033
Mississippi	505,313	494,909	438,168	470,794	394,178	430,847
North Carolina	1,264,366	1,428,786	1,562,735	1,585,929	1,445,790	1,530,229
Oklahoma	569,068	564,029	479,994	492,671	542,274	505,544
South Carolina	573,900	659,597	634,082	666,015	609,908	557,719
Tennessee	593,513	726,016	774,411	771,063	679,374	753,726
Texas	3,337,407	2,919,436	2,716,107	2,853,540	2,821,806	2,992,877
Virginia	905,189	1,020,953	1,114,583	1,184,433	962,906	891,329
West Virginia	292,096	308,659	288,923	274,210	284,121	278,860

SOURCE: Edward R. Hines. Center for Higher Education, Illinois State University.